

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent Appln. No. 09/838,252

wherein a predetermined region of outer surfaces of said coil ends in a radial direction of said stator core forms a continuous circumferentially-smooth heat-conducting surface, said outer surfaces facing radially outwards from said stator core and extending from a vicinity of said end surface of said stator core to apex portions of said coil ends, and

wherein a distribution channel for a liquid coolant is disposed for absorbing heat generated in said stator and conducted from said heat-conducting surface.

4. (Amended) An automotive alternator comprising:

a stator having a stator core formed with slots extending axially at a predetermined pitch in a circumferential direction and a stator winding installed in said stator core;

a rotor rotatably disposed on an inner circumferential side of said stator; and

a bracket for supporting said stator and said rotor,

wherein said stator winding is provided with a plurality of winding sub-portions each constructed by installing a strand of wire at intervals of a predetermined number of slots so as to alternately occupy an inner layer and an outer layer in a slot depth direction within said slots, turn portions of said strands of wire which are folded back outside said slots at said end surface of said stator core forming said coil ends and lining up generally uniformly in a circumferential direction to constitute a coil end group,

wherein a predetermined region of outer surfaces of said coil ends in a radial direction of said stator core forms a circumferentially-smooth heat-conducting surface, said outer surfaces

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facing radially outwards from said stator core and extending from a vicinity of said end surface of said stator core to apex portions of said coil ends, and

wherein a distribution channel for liquid coolant is disposed for absorbing heat generated in said stator and conducted from said heat-conducting surface.

11. (New) The automotive alternator according to claim 4, wherein said distribution channel is formed inside said bracket, a thermally-conductive resin being filled between said coil end group and said bracket in a state of general contact with said heat-conducting surface.

12. (New) The automotive alternator according to claim 4, wherein said distribution channel is constituted by a tube composed of a thermally-conducting material, a portion of said tube being disposed in a state of general contact with said heat-conducting surface of said coil end group.